Translation of the Amendment under PCT Article 19

1. A method of using a device that uses a relaxor ferroelectric solid solution single crystal, wherein the relaxor ferroelectric solid solution single crystal is capable of making transitions, at temperatures below the Curie temperature, between a first state which has a high permittivity and blocks optical transmission and a second state which has a low permittivity and allows optical transmission, and the relaxor ferroelectric solid solution single crystal undergoes a transition to the second state if an electric field above a threshold is applied in the first state and undergoes a transition to the first state if heated to or above the Curie temperature in the second state, the method being characterized by:

applying an electric field above a threshold to the relaxor ferroelectric solid solution single crystal in the device to cause the relaxor ferroelectric solid solution single crystal to make a transition from the first state to the second state; and

heating the relaxor ferroelectric solid solution single crystal in the device to or above the Curie temperature to cause the relaxor ferroelectric solid solution single crystal to make a transition from the second state to the first state.

2. The method according to claim 1, characterized in that the relative permittivity of the relaxor ferroelectric solid solution single crystal in the device is 9,000 or above in the first state, and 7,000 or below in the second state.

3. The method according to claim 1 or 2, characterized in that the relative permittivity of the relaxor ferroelectric solid solution single crystal in the device is approximately halved when the relaxor ferroelectric solid solution single crystal makes a transition from the first state to the second

state.

4. The method according to any one of claims 1 to 3, characterized in that the relaxor ferroelectric solid solution single crystal in the device is a pseudocubic crystalline/rhombohedral crystalline phase (001) plate.

5. The method according to any one of claims 1 to 4, characterized in that the device is an optical device which uses at least optical transmission characteristics of the relaxor ferroelectric solid solution single crystal.

6. The method according to claim 5, characterized in that the optical device is an optical memory or light valve.

7. The method according to claim 5 or 6, characterized in that the device uses not only the optical transmission characteristics, but also changes in dielectric characteristics of the relaxor ferroelectric solid solution single crystal taking place with changes in the optical transmission characteristics.

8. A device that uses a relaxor ferroelectric solid solution single crystal, wherein the relaxor ferroelectric solid solution single crystal is capable of making transitions, at temperatures below the Curie temperature, between a first state which has a high permittivity and blocks optical transmission and a second state which has a low permittivity and allows optical transmission, and the relaxor ferroelectric solid solution single crystal undergoes a transition to the second state if an electric field above a threshold is applied in the first state and undergoes a transition to the first state if heated to or above the Curie temperature in the second state, the device being characterized by:

means for applying an electric field above a threshold to

the relaxor ferroelectric solid solution single crystal in the device to cause the relaxor ferroelectric solid solution single crystal to make a transition from the first state to the second state; and

means for heating the relaxor ferroelectric solid solution single crystal in the device to or above the Curie temperature to cause the relaxor ferroelectric solid solution single crystal to make a transition from the second state to the first state.

9. The device according to claim 8, characterized in that the relative permittivity of the relaxor ferroelectric solid solution single crystal in the device is 9,000 or above in the first state, and 7,000 or below in the second state..

10. The device according to claim 8 or 9, characterized in that the relative permittivity of the relaxor ferroelectric solid solution single crystal in the device is approximately halved when the relaxor ferroelectric solid solution single crystal makes a transition from the first state to the second state.

11. The device according to any one of claims 8 to 10, characterized in that the relaxor ferroelectric solid solution single crystal in the device is a pseudocubic crystalline/rhombohedral crystalline phase (001) plate.

12. The device according to any one of claims 8 to 11, characterized in that the device is an optical device which uses at least optical transmission characteristics of the relaxor ferroelectric solid solution single crystal.

13. The device according to claim 12, characterized in that the optical device is an optical memory or light valve.

14. The device according to claim 12 or 13, characterized in that the device uses not only the optical transmission characteristics, but also changes in dielectric characteristics of the relaxor ferroelectric solid solution single crystal taking place with changes in the optical transmission characteristics.